Condensed Survey Results for the Drift Plains (Region 6)

I. Threats to habitats in the Drift Plains (Region 6)

Criteria for inclusion: The following **categories** of threats and **specific threats** were identified as "significant" or "moderate." The percentages listed below are the combined proportion of respondents indicating these threats as "significant" or "moderate," excluding those who answered "I don't know." Threats and categories listed below were rated in these categories by greater than 50% of respondents across habitat types in this region.

Agriculture and aquaculture: *Threats from farming and ranching as a result of agricultural expansion and intensification, including silviculture, mariculture, and aquaculture*	**87.7%**	**64**	
Conversion of habitat to annual crops	91.7%	55	Increase
Annual and perennial nontimber crops	72.4%	42	Increase
Livestock farming and ranching	65.5%	38	Remain the same
Wood and pulp plantations	31.4%	16	Remain the same
Aquaculture	27.0%	10	Remain the same
Residential and commercial development: *Threats from human settlements or other nonagricultural land uses with a substantial footprint*	**83.6%**	**61**	
Housing and urban areas	93.2%	55	Increase
Commercial and industrial areas	84.7%	50	Increase
Tourism and recreation areas (e.g., sites with a substantial footprint – golf courses, campgrounds, etc.)	35.1%	20	Increase
Invasives and other problematic species and genes: *Threats from non-native and native plants, animals, pathogens/microbes, or genetic materials that have or are predicted to have harmful effects on biodiversity following their introduction, spread, and/or increase in abundance*	**69.6%**	**48**	
Invasive/alien species	100.0%	45	Increase
Plant diseases	72.7%	32	Increase
Problematic native species (e.g. overabundant native deer or algae)	71.7%	33	Increase
Introduced genetic material (such as crop, seed stock, biocontrol, stocked/released species, etc.)	48.6%	18	Increase
Human intrusion and disturbance: *Threats from human activities that alter, destroy, and disturb habitats and species associated with nonconsumptive uses of biological resources.*	**67.2%**	**45**	
Recreation activities (e.g., ATVs, trail use, horseback riding, high-speed boating, canoeing)	79.1%	34	Increase
Natural systems modifications: *Threats from human activities that alter, destroy, and disturb habitats and species associated with nonconsumptive uses of biological resources*	**63.4%**	**45**	
Conversion of natural habitats to other land uses	90.7%	39	Increase
Over-mowing of natural areas	64.1%	25	Remain the same
Fire and fire suppression	53.7%	22	Remain the same
Dams and water management/use	51.3%	20	Remain the same
Log jam removal	44.7%	17	Remain the same
Pollution: *Threats from introduction of exotic and/or excess materials or*	**58.0%**	**40**	

energy from point and nonpoint sources			
Agriculture, residential, and forestry effluents	82.1%	32	Increase
Runoff from roads/service corridors	79.5%	31	Increase
Point source pollution from commercial/industrial sources	74.4%	29	Tie - Increase/Remain the same
Household sewage and urban water waste	66.7%	26	Increase
Chemical spills	63.2%	24	Remain the same
Garbage and solid waste	59.0%	23	Increase
Excess energy (e.g., noise/light pollution, warm water discharge, etc.)	54.1%	20	Increase
Air pollution (e.g., smoke, mercury emissions)	53.8%	21	Tie - Increase/Remain the same
Other stressors: *Additional threats and stressors directly affecting habitats, such as diseases and genetic diversity issues*	**50.9%**	**28**	
Low genetic diversity (due to reduced population size, species inbreeding, etc.)	76.9%	20	Increase
Diseases	81.8%	18	Increase
Climate change and severe weather: *Long-term climactic changes that may be linked to global warming and other severe climactic or weather events outside the natural range of variation that could wipe out vulnerable species or habitat.*	**40.6%**	**28**	
Shifting seasons/phenology	96.0%	24	Increase
Temperature extremes	92.3%	24	Increase
Changing frequency, duration, and intensity of drought	88.5%	23	Increase
Shifting and alteration of habitats due to climate change	88.0%	22	Increase
Changing frequency, duration, and intensity of floods	84.6%	22	Increase
Transportation and service corridors: *Threats from long, narrow transport corridors and the vehicles that use them, including associated wildlife mortality*	**38.6%**	**27**	
Roads and railroads	92.3%	24	Increase
Utility and service lines	62.5%	15	Remain the same
Shipping lanes	50.0%	10	Remain the same
Flight paths	31.8%	7	Remain the same
Biological resource use: *Threats from consumptive use of "wild" biological resources including deliberate and unintentional harvesting effects; also persecution or control of specific species*	**34.8%**	**23**	
Forestry practices (e.g., silvicultural methods leading to the lack of early successional habitat)	73.9%	17	Increase
Energy production and mining: *Threats from production of nonbiological resources*	**33.3%**	**22**	
Fossil fuel energy production	87.5%	42	Increase
Fossil fuel energy production	81.8%	18	Increase
Mining and quarrying	76.2%	16	Increase
Shale gas development (e.g., fracking)	72.7%	16	Increase
Renewable energy production	47.6%	10	Remain the same

II. Conservation actions for habitats in the Drift Plains (Region 6)

Criteria for inclusion: The following **categories** of actions and **specific actions** were identified as "very important" or "moderately important." The percentages listed below are the combined proportion of respondents indicating these actions as "very important" or "moderately important," excluding those who answered "I don't know." Actions and categories listed below were rated in these categories by greater than 50% of respondents across habitat types in this region.

	Land/Water/Species Management: *Actions directed at conserving or restoring sites, habitats, and the wider environment as well as actions directed at managing or restoring species, focused on the species of concern itself.*	**90.6%**	**58**
1.	Manage urban woodlots	100.0%	1
2.	Promote diversity of grassland types and successional stages	100.0%	9
3.	Promote diversity of wetland types and successional stages	100.0%	8
4.	Reduce stream bank erosion	100.0%	8
5.	Restore habitats and natural systems in **HABITAT**	97.8%	45
6.	*Restore habitats and natural systems in aquatic systems*	*100.0%*	*7*
7.	*Restore habitats and natural systems in barren lands*	*100.0%*	*1*
8.	*Restore habitats and natural systems in forests*	*95.0%*	*19*
9.	*Restore habitats and natural systems in grasslands*	*100.0%*	*9*
10.	*Restore habitats and natural systems in wetlands*	*100.0%*	*8*
11.	*Restore habitats and natural systems in subterranean systems*	*100.0%*	*1*
12.	Reduce losses of fish and wildlife habitats (due to agriculture, urban sprawl, commercial development, etc.)	93.0%	53
13.	Increase acres of riparian buffers	92.7%	51
14.	Reestablish natural disturbance regimes in **HABITAT**	92.1%	35
15.	*Reestablish natural disturbance regimes in barren lands*	*100.0%*	*1*
16.	*Reestablish natural disturbance regimes in forests*	*90.0%*	*18*
17.	*Reestablish natural disturbance regimes in grasslands*	*100.0%*	*9*
18.	*Reestablish natural disturbance regimes in wetlands*	*87.5%*	*7*
19.	*Reestablish natural disturbance regimes in subterranean systems*	*0.0%*	*0*
20.	Promote diversity of forest types and successional stages	90.0%	18
21.	Protect adjacent buffer zones	88.9%	16
22.	Restore and integrate diversity of habitats into crop-production dominated landscape	88.9%	8
23.	Develop and promote farming technologies and practices that have conservation benefits (e.g., cover crops, no till)	87.7%	50
24.	Species reintroduction. Please specify:	86.7%	13
25.	Link existing habitat blocks through corridor enhancement in **HABITAT**	85.5%	47
26.	*Link existing habitat blocks through corridor enhancement in agricultural lands*	*100.0%*	*8*
27.	*Link existing habitat blocks through corridor enhancement in aquatic systems*	*62.5%*	*5*
28.	*Link existing habitat blocks through corridor enhancement in barren lands*	*0.0%*	*0*
29.	*Link existing habitat blocks through corridor enhancement in developed lands*	*100.0%*	*1*
30.	*Link existing habitat blocks through corridor enhancement in forests*	*85.0%*	*17*
31.	*Link existing habitat blocks through corridor enhancement in grasslands*	*100.0%*	*9*
32.	*Link existing habitat blocks through corridor enhancement in wetlands*	*87.5%*	*7*
33.	*Enhance corridors in subterranean systems*	*0.0%*	*0*
34.	Decrease number of combined sewer overflow events	81.3%	13
35.	Reduce nutrient and toxin loads (e.g., heavy metals, pharmaceuticals, fertilizers, insecticides)	78.9%	45
36.	Control invasive species in **HABITAT**	75.4%	43
37.	*Control invasive species in agricultural lands*	*55.6%*	*5*
38.	*Control invasive species in aquatic systems (e.g., Asian carp, zebra mussels, invasive aquatic plants)*	*62.5%*	*5*

39.	*Control invasive species in barren lands*	*0.0%*	*0*
40.	*Control invasive species in developed lands*	*0.0%*	*0*
41.	*Control invasive species in forests*	*95.0%*	*19*
42.	*Control invasive species in grasslands*	*66.7%*	*6*
43.	*Control invasive species in wetlands*	*87.5%*	*7*
44.	*Control invasive species in subterranean systems*	*100.0%*	*1*
45.	Protect natural water regimes (e.g., withdraws, warm-water discharge)	75.0%	6
46.	Reduce stream head cutting	75.0%	6
47.	Control problematic native species in **HABITAT**	69.1%	38
48.	*Control problematic species (e.g., deer, raccoon, geese, domestic cat, feral hog) in agricultural lands*	*88.9%*	*8*
49.	*Control problematic native species in aquatic systems*	*62.5%*	*5*
50.	*Control problematic species (e.g., deer, raccoon, skunk, coyote, domestic cat, feral hog) in barren lands*	*0.0%*	*0*
51.	*Control problematic species (e.g., deer, raccoon, geese, domestic cat, feral hog, exotic/aggressive vegetation) in developed lands*	*0.0%*	*0*
52.	*Control problematic species (e.g., deer, raccoon, domestic cat, feral hog) in forests*	*75.0%*	*15*
53.	*Control problematic species (e.g., raccoon, skunk, coyote, domestic cat) in grasslands*	*50.0%*	*4*
54.	*Control problematic species (e.g., deer, raccoon, domestic cat, feral hog, exotic/aggressive vegetation) in wetlands*	*71.4%*	*5*
55.	*Control problematic native species in subterranean systems*	*100.0%*	*1*
56.	Increase acres enrolled in the Classified Forest and Wildlands Program	66.1%	37
57.	Protect and enhance undeveloped shorelines	64.3%	9
58.	Decrease E. coli counts	62.5%	10
59.	Improve integrated pest management	55.6%	5
60.	Improve drainage management	52.8%	28
61.	Manage biofuel grasslands	42.9%	6
62.	Reduce recreational overuse of **HABITAT**	40.0%	18
63.	*Reduce recreational overuse of aquatic systems*	*25.0%*	*2*
64.	*Reduce recreational overuse of forests*	*47.4%*	*9*
65.	*Reduce recreational overuse of grasslands*	*44.4%*	*4*
66.	*Reduce recreational overuse of wetlands*	*37.5%*	*3*
67.	*Reduce recreational overuse of subterranean systems*	*0.0%*	*0*
68.	Dam removal	37.5%	6
69.	Mine reclamation	36.6%	15
70.	Ex situ conservation (protection of a species outside of its natural habitat). Please specify:	17.1%	6
71.	Remove log jams	12.5%	1
72.	Restore and integrate diversity of habitats into developed landscapes	0.0%	0
	Livelihood, economic, and other incentives: *Actions to use economic and other incentives to influence behavior*	**77.4%**	**48**
73.	Promote conservation payment programs (e.g., payment for ecosystem services, conservation easements)	93.2%	41
74.	Promote nonmonetary values of natural systems within the state	78.3%	36
75.	Manage recreational opportunities to be compatible with fish and wildlife habitats	71.7%	33
76.	Support substitution of alternatives for environmentally harmful products and processes	65.2%	30
77.	Link natural resources to livelihoods through nature tourism	56.8%	25
78.	Promote market forces (e.g., creation of a nitrogen trading market, promotion of alternative agricultural markets) as a tool for conservation	45.2%	19
	Education and awareness: *Actions directed at people to improve understanding and skills, and influence behavior.*	**76.4%**	**55**
79.	Educational programs in general	96.3%	52
80.	Educational programs specifically for K-12	92.6%	50
81.	Training programs for stakeholders	86.8%	46
82.	Improvement of signage and other communication materials in conservation areas	55.6%	30

	Land/water protection: *Actions to identify, establish, or expand parks and other legally protected areas, and to protect resource rights*	**76.1%**	**51**
83.	Reduce conversion to cropland	91.7%	44
84.	Preserve currently existing corridors	87.8%	43
85.	Acquire conservation easements to protect important wildlife habitats	84.0%	42
86.	Build/strengthen CRP partnerships	82.6%	38
87.	Acquire currently unprotected HABITAT	81.0%	34
88.	*Acquire currently unprotected aquatic systems (manage and/or educate for easement habitat values)*	*88.9%*	*8*
89.	*Acquire currently unprotected barren lands*	*0.0%*	*0*
90.	*Acquire currently unprotected forests*	*73.3%*	*11*
91.	*Acquire currently unprotected grasslands*	*85.7%*	*6*
92.	*Acquire currently unprotected wetlands*	*88.9%*	*8*
93.	*Acquire currently unprotected subterranean habitats*	*100.0%*	*1*

	Law and policy: *Actions to develop, change, influence, and help implement formal legislation, regulations, and voluntary standards.*	**71.9%**	**46**
94.	Improve compliance with and enforcement of current policies	88.4%	38
95.	Increase regulations on invasive species	80.0%	36
96.	Reduce urban sprawl through planning and zoning	77.3%	34
97.	Set private sector standards and codes	62.5%	25
98.	Establish legal lake levels	60.0%	3
99.	Establish submergent vegetation control guidelines	60.0%	3
100.	Change current laws, policies, and regulations. Please specify:	59.4%	19
101.	Increase compliance of existing rules and regulations for aquatic systems	50.0%	3
102.	Establish rules and guidelines for piers and other structures	40.0%	2

	External capacity building: *Actions to build the infrastructure to do better conservation*	**61.7%**	**37**
103.	Increase state's capacity for research and monitoring of conservation actions	91.7%	33
104.	Promote use of research and science in conservation decision-making processes	91.7%	33
105.	Develop alliances and partnerships (e.g., between producers, landowners, and conservation professionals)	86.1%	31
106.	Strengthen conservation financing	77.1%	27
107.	Promote green infrastructure	61.8%	21
108.	Develop institutions and civil society	46.4%	13

III. Participation in conservation actions for habitats in the Drift Plains (Region 6)

Criteria for inclusion: Respondents were asked if their agency/organization had acted or plans to take action in a general category of conservation actions within this region. "I don't know" responses to this question were excluded for this analysis. Responses were aggregated across all habitat types.

Have you taken (since 2005) or do you currently plan to take conservation actions in this category for fish and wildlife habitats within HABITAT in the Valleys and Hills (Region 4)?

	Yes		No		Total
	%	N	%	N	Responses
Land/water protection	87.5%	35	12.5%	5	87.5%
Land/water/species management	69.0%	20	31.0%	9	69.0%
Education and awareness	87.2%	34	12.8%	5	87.2%
Law and policy	67.6%	25	32.4%	12	67.6%
Livelihood, economic, and other incentives	56.0%	14	44.0%	11	56.0%
External capacity building	64.0%	16	36.0%	9	64.0%